

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 5270-JHNS-1

Investigation into Least-Cost)	
Investments, Energy Efficiency,)	Hearing at
Conservation and Management of))	Montpelier, Vermont
Demand for Energy In Re: Village)	November 17, 1995
of Johnson Water and Light)	
Department's Integrated Resource))	
Plan filing)	

Order entered: May 28, 1996

PRESENT: Sandra A. Waldstein, Hearing Officer

APPEARANCES: William B. Piper, Esq.
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for Village of Johnson Water & Light
Department

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Service

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I. INTRODUCTION

This Proposal for Decision ("PFD") recommends that the Public Service Board ("Board") approve the Integrated Resource Plan ("IRP") of the Village of Johnson Water & Light Department ("Johnson") pursuant to a Stipulation in this Docket filed by Johnson and the Department of Public Service ("Department" or "DPS"). As filed and updated, Johnson anticipates peak demand savings of 205.5 kilowatts ("KW") and energy savings of 2,443 megawatt hours ("MWHs") through the year 2,000. Johnson anticipates that cost-effective demand-side management ("DSM") programs will allow the utility and its customers to reduce energy consumption while providing positive net societal benefits. The parties agree that Johnson's IRP, as modified by the Stipulation, meets the requirements of 30 V.S.A. § 218c and complies with the Board's Orders in Docket No. 5270 and the DPS's Twenty-Year Plan. I recommend that the Board approve this IRP subject to Johnson's compliance with the conditions and agreements incorporated in the Stipulation.

II. PROCEDURAL HISTORY

Johnson filed this IRP on March 20, 1995. This filing was an update to Johnson's IRP originally filed on June 18, 1991. Revisions were made to Johnson's IRP over the interim period as the DPS and Johnson had informal discussions regarding Johnson's IRP.

Status conferences were held on February 16, 1995, and September 7, 1995, at which time a schedule was set for proceeding in this Docket. At a status conference on September 7, 1995, Johnson, the DPS, and the three other utilities represented by the Metrix, Inc.¹ consulting firm agreed to hold consolidated technical hearings in their respective IRP Dockets. Prior to the technical hearing, the parties prefiled testimony on several issues. However, the parties filed a draft stipulation prior to the technical hearing, and a fully executed Stipulation at that hearing, resolving all outstanding issues regarding Johnson's IRP. An evidentiary hearing on the Stipulation was held on November 17, 1995.

On December 8, 1995, the parties filed waivers of the right granted under 30 V.S.A. § 811 to comment or present argument on the proposal for decision in this Docket.

1. The other utilities represented by Metrix, Inc., include Barton Village, Inc. Electric Department, Village of Orleans Electric Department, and Town of Readsboro Electric Department.

III. FINDINGS OF FACT

A. Load Forecast

1. Johnson currently has approximately 790 customers. Exh. Johnson A. at Appendix B, p.1.

2. Johnson has no industrial customers, although Johnson State College, the systems' largest customer, is functionally an industrial load. The Johnson State College campus accounts for over sixty percent of system load. *Id.* at 2-3.

3. Johnson projects a system peak of 3,775 KW and energy consumption of 18,689 MWH in year 2,000. *Id.* at 3-8.

4. Johnson has agreed to make the following improvements to its forecasting methodology for its next IRP (or for any forecast that is to be used as the basis to acquire long-term resources):

- (a) Johnson will utilize more refined load forecasting techniques, which include the use of appropriate econometric or end-use methods and uncertainty analyses;
- (b) Johnson will avoid using forecast methods that are simply extrapolation techniques;
- (c) Johnson will take into account current and future developments, such as appliance efficiency standards and economic development, that are highly likely to affect electricity demand, but that are not fully reflected in historical data;
- (d) Johnson will provide more extensive documentation and contextual information to support the forecast, including but not limited to documentation which explains the methodology, analyses, basic assumptions, data inputs, and uncertainty factors related to the load forecast;
- (e) Johnson will conform the load forecast to the requirements of the *Vermont Twenty-Year Electric Plan* (December, 1994) regarding Integrated Resource Planning Guidelines (Chapter 8). Stip. at ¶ 2.

B. Supply Resources

5. Johnson has agreed to the revised assumptions and methodologies described in Attachment I to the Stipulation and will submit a Supply Analysis reflecting the new assumptions and methodologies as a compliance filing within sixty days of the date of the Stipulation, by December 30, 1995.² Stip. at ¶ 4.

6. Johnson will develop values for Transmission and Distribution ("T&D") avoided costs to be submitted as a compliance filing within sixty days of the date of the Stipulation, by December 30, 1995.³ Stip. at ¶ 5.

7. Johnson will calculate new line loss adjustments for the five costing periods: summer, winter, peak, off-peak, and capacity. These calculations will be submitted as a compliance filing by December 31, 1995.⁴ Stip. at ¶ 6.

8. Johnson has agreed not to use its current IRP forecast for supply acquisitions that require approval under 30 V.S.A. §248. Stip. at ¶ 3.

9. Johnson will use its load forecast for identifying avoided costs in order to determine cost-effective T&D and DSM measures and programs. Tr. 11/15/95 at 12.

C. Demand-Side Management

10. Johnson estimates that cost-effective DSM programs will result in savings to Johnson's ratepayers of 205.5 KW and 574 MWHs in year 2,000, or 13 percent of anticipated peak load and 3 percent of anticipated energy requirements. Finding 3 above; Johnson filing, 4/12/96.

11. Johnson agrees to design or adopt and implement programs, as outlined below, that contain strategies to acquire cost-effective DSM resources available from commercial remodeling and equipment replacement, residential high-use customer fuel-switching, and low income high-use residential customers. Stip. at ¶ 12.

12. Johnson has agreed to implement the DSM program designs contained in its IRP with the modifications identified for each program below using the revised avoided costs developed pursuant to Paragraph 4 of the Stipulation. Stip. at ¶ 7.

13. The cost-effectiveness of Johnson's proposed DSM programs cannot be determined at this time. The DPS states that there are methodological errors in Johnson's compliance filings which prevent a precise calculation of cost-effectiveness. DPS letter of 3/27/96.

(i.) Residential New Construction

2. Johnson submitted this filing on December 26, 1995.

3. Johnson submitted this filing on December 26, 1995.

4. Johnson submitted this filing on December 26, 1995.

14. Johnson agrees to implement the program design contained in its IRP. Stip. at ¶ 8.

15. Johnson has agreed that if its residential new construction program is not successful in reaching a 50% market penetration of new residential connections and electrical efficiency savings as of January 1, 1997, it will implement the assessment fee-type residential new construction program design being implemented by Washington Electric Cooperative, Inc. ("WEC"), provided that the WEC program in 1995 shows a 50% market penetration and electrical efficiency savings from its new residential hookups. Stip. at ¶ 8.

(ii.) Small Commercial Retrofit Program

16. Johnson has agreed not to implement the program design for this program that is contained in its IRP. Stip. at ¶ 9.

17. Johnson will submit a commercial equipment replacement and remodeling program design by December 15, 1995, that meets the terms outlined in the Stipulation.⁵ Stip. at ¶ 9.

(iii.) Farm Program

18. Johnson Electric Department currently serves only two farms. Exh. Johnson A. at 8-6.

19. Johnson has agreed to use a single track approach to provide comprehensive audits to all eligible farm customers and will not require customers who receive audits to pay for those audits, even if they choose not to install any of the recommended measures. Stip. at ¶ 10a.

20. Johnson has agreed to develop and use the appropriate avoided costs, externalities and risk adjustments and T&D losses for each of the four costing periods and incorporate them into the field screening tool used by the farm program implementation contractor. Stip. at ¶ 10b.

21. Johnson has agreed to complete the program for the two dairy farms served by it by December 31, 1995. Stip. at ¶ 10c.

(iv.) Commercial New Construction

22. Johnson will use its program contained in its IRP until the statewide program design for both Act 250 and non-Act 250 projects is developed, at which time

5. Johnson submitted this filing on December 18, 1995.

Johnson agrees to consider adopting and implementing the statewide program. Stip. at ¶ 11.

(v.) Residential High-Use

23. Johnson has agreed to adopt and implement a residential fuel-switching program with the same incentive structure and services approved for the Town of Hardwick in Docket 5270-HDWK-1. Stip. at ¶ 13a.

24. Johnson agrees that program implementation will be completed by January 1, 1997, or Johnson will submit a compliance filing on that date explaining the reasons for not completing program implementation and providing a revised date for completion. *Id.*

25. Johnson has agreed to provide efficiency improvements for its low-income residential high-use customers through an agreement with the local weatherization assistance program, Northeast Kingdom Organization ("NEKO"). Johnson will reimburse the agency and may apply for a rebate from the Weatherization Trust Fund pursuant to 33 V.S.A.

§ 2503. Stip. at ¶ 13b.

(vi.) Commercial Remodeling and Equipment Replacement

26. Johnson has agreed to adopt and implement a program similar to the program approved for the Village of Hyde Park Electric Department in Docket 5270-HDPK-1. Stip. at ¶ 14.

27. Johnson agrees to submit its program design by December 15, 1995⁶, and begin implementation starting January 1, 1996. Stip. at ¶ 14.

28. Johnson agrees that when a statewide program is designed and implemented in Vermont, Johnson will consider adopting and implementing the statewide program. Stip. at ¶ 14.

(vii.) Residential "Lost Opportunity" Program

29. Johnson has agreed that when a statewide program design is complete, Johnson will consider adopting and implementing it. Stip. at ¶ 15.

(viii.) Large Commercial and Industrial Program

30. Johnson has agreed to work with Johnson State College to conduct a comprehensive evaluation of DSM potential and to develop and submit a plan to acquire those resources. The plan will contain a plan to capture lost opportunity and retrofit opportunities at the College. Stip. at ¶ 16.

6. Johnson submitted this filing on December 18, 1995.

(ix.) Other DSM Matters

31. Johnson has agreed to provide a schedule of DSM program implementation that includes at least annual program budgets and energy and capacity impacts expected from the program. Johnson will submit this schedule by January 15, 1996.⁷ Stip. at ¶ 17.

32. Johnson has agreed to submit a compliance filing containing all required DSM program modifications sixty days following an Order in this Docket.⁸ Stip. at ¶ 18.

33. Johnson has agreed that the issue of load impact of DSM resources beyond the proposed DSM programs may be reopened in any applicable proceeding under 30 V.S.A. § 248. Stip. at ¶ 19.

D. Transmission And Distribution

34. Johnson has agreed to develop transformer, capacitor, and regulator acquisition programs that will enable Johnson to make purchase decisions that ensure the least cost, using the net present value of the life-cycle societal-cost test. Stip. at ¶ 20.

35. Johnson agrees that its T&D acquisition programs will conform to Attachment II of the Stipulation. Stip. at ¶ 20.

36. Johnson will submit completed acquisition procedures to the Board and DPS by February 1, 1996.⁹ Stip. at ¶ 20.

37. Johnson has agreed to complete the implementation plan for each project listed as Priority 1, 2, and 3 in its distribution system study. The plan shall detail justification for each project that Johnson determines should not be implemented. Stip. at ¶ 21.

38. Johnson will submit the plan to the Board and the DPS by January 1, 1996.¹⁰ Stip. at ¶ 21.

E. Other Findings

39. Johnson's IRP as filed, together with the Stipulation, represents a least-cost plan for the acquisition of energy-efficiency resources for Johnson's customers, as required by 30 V.S.A. § 218c. Tr. 11/21/95 at 35, 37.

7. Johnson submitted this filing on December 26, 1995.

8. Johnson submitted this compliance filing on January 18, 1996.

9. Johnson has not made this filing to date.

10. Johnson has not made this filing to date.

40. The Stipulation filed by the parties is in the best interests of ratepayers and is a necessary part of the fulfillment of the requirements for approval of this IRP. Tr. 11/21/95 at 37.

IV. DISCUSSION

Johnson is one of four first-round IRPs to be settled on a consolidated basis. The Department and Johnson have agreed on certain modifications to Johnson's IRP and have agreed that with those modifications Johnson's IRP should be approved by the Board as meeting the statutory criteria of 30 V.S.A. § 218c.

Since Johnson filed its first proposed IRP in June, 1991, significant experience has been gained regarding the appropriate design for DSM programs to ensure that customers have an opportunity to implement a comprehensive package of cost-effective energy efficiency measures. Johnson's current proposed IRP, as modified by the parties' Stipulation, incorporates many of the analytical methodologies and program designs adopted by other Vermont utilities. Johnson has met most of the compliance filing deadlines established in the Stipulation. Due to the start of program implementation in January 1996, Johnson filed its descriptions of DSM program modifications well ahead of the schedule called for in the Stipulation. However, in a letter filed on March 27, 1996, the DPS states that there are several flaws in the methodology that Johnson used to screen its largest (in terms of energy and dollar savings) DSM program, residential fuel-switching. The DPS maintains that the program has positive net societal benefits when screened properly.

Due to the large impact that the residential fuel-switching program has on Johnson's overall savings and ultimate cost-effectiveness of all its DSM programs, I recommend that the Board require Johnson to make an additional compliance filing to resolve the concerns identified in the DPS's letter. DPS letter of 3/27/96; Johnson filings of 12/26/95, 4/12/96. Johnson should make that filing within two weeks of the date of this Order. As specified in the parties' Stipulation, the DPS shall file comments on Johnson's filing and may request that the Board resolve any disputes. *See Stip.* at ¶ 23.

I conclude, based on the evidence in this Docket, that Johnson's IRP, as modified by the parties' Stipulation, is a least-cost plan that will acquire all cost-effective DSM pursuant to 30 V.S.A. § 218c and the Board's Order in Docket No. 5270.

I recommend that the Board approve Johnson's IRP as modified by the parties' Stipulation. In addition, the Board should leave this Docket open until Johnson has

made all its compliance filings and any concerns raised by the DPS with those filings are resolved.

The foregoing is hereby reported to the Public Service Board in accordance with the provisions of 30 V.S.A. § 8. Although the parties have waived their right to comment on this Proposal for Decision in accordance with 3 V.S.A. § 811, this PFD has been served on all parties with an opportunity for them to file comments and request oral argument before the Board.¹¹

DATED at Montpelier, Vermont, this 28th day of May, 1996.

s/Sandra A. Waldstein

Sandra A. Waldstein

Hearing Officer

11. On May 10, 1996, the DPS filed comments, but did not request oral argument. Johnson did not make any filing. I have modified the PFD to accurately reflect the DPS's letter of 3/27/96 which states that changes to Johnson's screening methodology for residential fuel-switching programs "may" result in the programs screening with net societal benefits.

V. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that:

1. The findings, conclusions and recommendations of the Hearing Officer are hereby adopted.
2. Johnson's IRP is approved as modified by the parties' Stipulation.
3. Johnson shall submit a compliance filing within two weeks of the date of this Order that addresses the concerns raised by the DPS regarding the cost-effectiveness of Johnson's DSM programs.
4. Johnson shall submit a compliance filing regarding its Residential Direct Install Program by January 1, 1997.
5. Johnson shall submit a compliance filing by January 1, 1997, regarding the implementation of its Residential High-Use Program.
6. This Docket shall remain open until all the above compliance filings have been made, the DPS has filed comments on those filings, and any disputed issues are resolved.
7. Johnson shall file annual DSM reports on April first of each year beginning in 1996.
8. Johnson shall file its next IRP on or before March 20, 1998.

DATED at Montpelier, Vermont, this 28th day of May, 1996.

<u>s/Richard H. Cowart</u>)	
)	PUBLIC SERVICE
<u>s/Suzanne D. Rude</u>)	
)	BOARD
<u>s/David C. Coen</u>)	OF VERMONT

OFFICE OF THE CLERK

FILED: MAY 28, 1996

ATTEST: s/Susan M. Hudson
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board of any technical errors, in order that any necessary corrections may be made.

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.